

REMARKS

Claims 1-11 are pending in the application. Claims 1, 2, 4-6, 10, and 11 stand rejected.

Claims 1 and 6 are independent claims.

The Applicant wishes to thank the Examiner for indicating that each of the claims 3 and 7-9 would be allowable if each claim is rewritten as an independent claim incorporating all features of the base and any intervening claims. The Applicant, at this time, wishes to defer rewriting any one of the claims 3 and 7-9.

Claim 1 stands rejected under 35 U.S.C '103(a), as allegedly being obvious over *Takahashi et al.* (U.S. 4,661,946) ("Takahashi") in view of *Eagan et al.* (U.S. 5,303,191).

Claim 1 recites an apparatus for converting pulse code modulation (PCM) multi-channel signals, the apparatus comprising, *inter alia*, "at least one codec means for selectively converting said identified input digital signals received in said one of said plurality of communication channels from said one of said two different modulation standards to the other one of said two different modulation standards in response to said channel select signal." Claim 6 recites a first codec and second codec that are, in combination, similar to the codec of claim 1. The support for each codec in each claim can be found in the original claim 1.

As noted in the specification, a PCM signal is a multi-channel signal (page 7, line 4-9). If each apparatus of claims 1 and 6, each having a plurality of communication channels, receives a PCM signal of, for example, A-law modulation and 32 channels, the channel selector generates a channel select signal. Thereafter, a codec means "selectively convert[s] said identified input digital signals received in said one of said plurality of communication channels from said one of said two different modulation standards to the other one of said two different modulation standards in response to said channel select signal," as codec means identifies one of the plurality

of communication channels and converts the modulation of the signal in the identified channel (see also page 10, line 10-18; page 11, line 18-21).

The United States Court of Appeals for the Federal Circuit held that to “reject claims in an application under section 103, [the Office Action] must show an unrebutted *prima facie* case of obviousness (*In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998) (citing *In re Deuel*, 51 F.3d 1552, 1557, 34 USPQ2d 1210, 1214 (Fed. Cir. 1995))). The *prima facie* case can be established only if the prior art references, alone or in combination, teach all features in the claims (*In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)), including those in functional language (*In re Schreiber*, 128 F.3d 1473, 1478, 44 USPQ2d 1429 (Fed. Cir. 1997) (holding that the patent applicant is free to recite features of an apparatus claim in functional language as long as the features in functional language are not inherent to the prior art)).

In rejecting claims 1 and 6, the Office Action indicates that code of claim 1 and 6 is identical to the encoding law conversion memory 24 of Takahashi. To support, the Office Action points to Takahashi’s statements that “the digital switch module 10 performs time division switching, whereby data is switched from one of the trunks, e.g., 13, to the other trunk 14 in time slots. A control memory 29 controls the conversion performed by the encoding law conversion memory 24 within each time slot.” (present Office Action, page 2). The Office Action indicates that “[i]t is clear that at each time slots there will be only one channel for digital encoding law section” (id.)

The Applicant respectfully submits that Takahashi discloses an encoding law conversion memory 24 that converts the modulation of the data from one modulation to another modulation. However, nowhere in Takahashi is there a disclosure that the memory 24 selectively converts an input digital signal contained in one of the plurality of channels from the first modulation to the

second modulation in response to the channel select signal (see column 5, line 52 – column 6, line 39 (failing to disclose that the modulation of each of the voice and non-voice data in one of the channels is selectively converted from one modulation to another modulation); see also Figure 1-4; see also page 3, line 20 – page 4, line 1). Instead, Takahashi teaches that the memory 24, as does the prior art disclosed in the present application, converts the modulation of the signal contained in ALL channels, indiscriminately (id.).

The Applicant, with utmost respect, submits that the statement by Takahashi cited in the Office Action, at page 4, line 4-7, does not support the rejections. In addition, even if each “time slot,” as indicated in Takahashi, represents one channel, as the Office Action suggests, the cited statement does not indicate that the memory 24 selectively converts the modulation of a signal contained in one of the plurality of communication “time slots” or channels. If the Office Action, however, believes otherwise, the applicant respectfully requests concrete documentary evidence supporting the Office Action’s belief, as required by the Federal Circuit (*In re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001)) and MPEP 2144.03(C).

Therefore, the applicant respectfully submits that Takahashi does not disclose a “codec means for selectively converting said identified input digital signals received in said at least one channel from the first modulation standard to the second modulation standard in response to said channel select signal,” as recited in claims 1 and 6.

Eagan, as read by the applicant, also fails to disclose an apparatus comprising a “codec means for selectively converting said identified input digital signals received in said at least one channel from the first modulation standard to the second modulation standard in response to said channel select signal,” as recited in claims 1 and 6.

Both Takahashi and Eagan, therefore, fail to show all features of claims 1 and 6, and both references, alone or in combination, do render claims 1 and 6 *prima facie* obvious. The Applicant respectfully requests withdrawal of the rejections on the claims.

Claims 2 and 6 stands rejected under 35 U.S.C '103(a), as allegedly being obvious over Takahashi in view of Eagan.

Claims 2 and 6 recite "a first codec means for selectively converting said input digital signal... into an analog signal in response to said channel select signal; [and] a second codec means for converting said converted analog signal by said first codec means into corresponding digital signals."

In rejecting claims 2 and 6, the Office Action indicates that the first codec and second codec of the present claims are disclosed in 2nd box and 4th box, respectively, of the encoding law conversion memory 24.

The Applicant respectfully submits the neither 2nd box nor 4th box of the encoding law conversion memory 24 converts a digital signal into an analog signal or vice versa. Instead, either box merely converts the modulation of the digital signals from one modulation to another modulation (see column 4, line 52 – column 5, line 39 and Figure 4 (disclosing that signals input to each box of the encoding law conversion memory is a digital signal and the signals output from the each box and input to either A-law or μ -law digital terminal are digital signal)).

Therefore, Takahashi fails to disclose recite "a first codec means for selectively converting said input digital signal... into an analog signal in response to said channel select signal; [and] a second codec means for converting said converted analog signal by said first codec means into corresponding digital signals," as recited in claims 2 and 6.

Moreover, as Eagan also fails to disclose "a first codec means for selectively

converting said input digital signal... into an analog signal in response to said channel select signal; [and] a second codec means for converting said converted analog signal by said first codec means into corresponding digital signals," as recited in claims 2 and 6, two references, alone or in combination, fail to render claims 2 and 6 obvious.

The Applicant submits that claims 2 and 6 are patentable over Takahashi and Eagan on an additional ground that Takahashi teaches away from the present invention.

In addition to the teaching requirement noted above, the Federal Circuit held that the *prima facie* case may be rebutted if the prior art reference, in any material respect, teaches away from the claims (*In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed. Cir. 1997)).

In the present case, Takahashi discloses that a system that converts the digital signal into analog signals, in the process of converting the modulation of a signal, may be expansive. Takahashi, however, avoids the exorbitant cost by converting the modulation of signals without converting the digital signal to an analog signal (column 1, line 35-44 and column 1, line 66 – column 2, line 2). In the process, Takahashi teaches away from claims 2 and 6. As Takahashi expressly teaches away from claims 2 and 6, Takahashi, in combination with another prior art reference, does not render claims 2 and 6 obvious.

For all foregoing reasons, applicant respectfully submits that claims 1, 2, and 6 are patentable over Takahashi and Eagan. Applicant respectfully requests withdrawal of the rejection on each claim.

Other claims in this application are each dependent on the independent claims 1 and 6 and are believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

Amendment
Serial No. 09/350,436

Should the Examiner deem that there are any issues which may be best resolved by telephone, please contact Applicant's undersigned representative at the number listed below.

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